

Translated Readings

The following items have been culled from the CIA *Scientific Information Reports*, distributed by the Office of Technical Services, U.S. Department of Commerce. Numbers following each item refer to the item and issue, in that order. All issues are from the PB 131891 T series.

Public Health Administration

Mass aerogenic vaccination against anthrax was performed by Major General of the Medical Service N. I. Aleksandrov et al., experimentally in a hospital room with a volume of 40 cu.m., one window, and one door. From 40 to 50 persons, provided with seating and an intercom system, were vaccinated with three sprayers during each run. There were five series of vaccine from strains STI-1 and No. 3, with initial activity of 20-2,500 billion spores per gram. According to the activity of the vaccine, from 2 to 3 gm. were put into each sprayer, emitting 4 to 6 gm. into the room. Exposures ranged from 5 to 15 minutes.

In all, 363 men and women between the ages of 18 and 45 were immunized. In 1 to 3 weeks thereafter no ill effects were observed. Results of immunization tests were given in a table (not in the translation). It is concluded that spray vaccination makes it possible for a team of 5 or 6 to vaccinate 1,000 persons an hour (87, 32).

Plans for public health in 1960 in the U.S.S.R., outlined by S. V. Kurashov, Minister of Health, include construction of 2.4 million apartments and 1 million individual dwellings, graduation of 25,000 physicians and 68,000 "sub-professional" medical workers and pharmacists, and a 7 percent increase in public health expenditures. The Ministry urges the use of gamma globulin and vaccines to eradicate children's diseases such as diphtheria, whooping cough, and measles (145, 44).

A description of the system of medical services in Czechoslovakia, by E. Skrbkova, Moscow, reports absorption of social welfare depart-

ments by the health departments. The director of united therapeutic and preventive medical service of a rayon is also in charge of social welfare (84, 40).

Organization of public health institutions in Hungary, their history and functions, is described by Dr. Frigyes Doleschall, Minister of Health (85, 40).

Psychiatric rehabilitation in the U.S.S.R. is described by G. Martin, St. Joseph's Hospital, Berlin (160, 41).

Toxicity Studies

A number of toxicity studies reported by U.S.S.R. scientists included reports by S. N. Golikov et al. on six derivatives of 1,3-amino-propanol; N. A. Zhilova, on benzene and acetone vapors; E. M. Bongard and V. F. Shlyapin, on ethylene oxide; L. A. Timofeyevskaya, on monoethanolamine; G. N. Zayeva, on anixole derivatives; and S. N. Kremnava, on bis-trichloramyl-sulfide. All authors are located in Moscow (117-121 incl., 45).

Toxicology of new chemical substances, with recommended tolerance limits, are published by S. N. Kremeneva et al., Moscow, for dichlorohydrin, nitrocyclohexane, silicochloroform, aminoanthic acid, and thiodivaleric acid (108, 46).

The toxicity of a trialkylthiophosphate insecticide, sold as Tinox, is reported by T. Hiepe and E. Seidel, Leipzig (110, 46).

Data on the toxicology of methylsystox, an organophosphorus compound composed of two isomers of dimethyl beta-ethylmercaptoethyl thiophosphate, is published by N. K. Statsek of Kiev (129, 44).

Occupational Health

Industrial vibrations, their effects and preventive measures, are discussed by V. G. Trentyev, Moscow (69, 39).

A comprehensive list of the toxic gases, vapors, and dusts frequently found on industrial

premises, and the tolerance limits established by the chief State sanitation inspector of the U.S.S.R., are listed in a report by Z. B. Smelyanskiy and I. P. Ulanova, Moscow (83, 37).

Data on the action of low-intensity industrial irritants, both physical and chemical, with respect to the reactivity of experimental animals are offered by V. K. Navrotskiy, Khar'kov. Physical factors included chilling, heating, and ultraviolet irradiation; the chemical agents were benzene, aniline, nitrobenzene, lead (acetate), tetraethyl lead, carbon tetrachloride, dichlorethane, sulfur dioxide, carbon monoxide, and aviation gasoline (107, 45).

Prophylactic use of oxygen for industrial workers, as reported by Prof. Kh. Vaynshteyn, Chelyabinsk, began experimentally 4 years ago with men in varnish, dye, and chemical factories. Oxygen in 60 percent concentration was breathed for 45 minutes at the end of the working shift, for a period of 15 to 20 days. The treatment is reported to be in wide use in the industrial centers of the Chelyabinskaya Oblast (81, 34).

Infectious Diseases

A direct method of obtaining a bacterial count for reservoir water within 2½ hours, said to be proposed in 1932 by A. S. Razumov, is recommended by L. Ye. Korsch, Moscow. A water sample is passed through a molecular filter which is dried, stained with erythrosin, dried again, and cleared with immersion oil. The organisms are counted by the immersion system with an ocular micrometer, and the number per milliliter calculated by formula (74, 33).

An improved, specific method of isolating types A, B, C, D, and F of *Clostridium perfringens*, on the principle of culturing suspect organisms between two indicator layers of agar, is detailed by B. D. Bychenko, Moscow (103, 44).

Experiments with aerosols of triethylene glycol and calcium hypochlorite to determine rate and duration of their effects on PR8 influenza virus, with white mice and chick embryos as hosts, are reported by Liu Yuan-yuan, Li Han-t'ang, and Wang Chih-lum, Peiping (85, 42).

Microtechnique for rapid determination of bacteria by biochemical reaction is described by

Tseng Fan-chi, Peiping. Identification of pathogenic enterobacteria is achieved in 20 to 24 hours, in contrast to 4 or 5 days by conventional methods. The investigators find the technique preferable to the paper disk method of Sanders et al. (123, 41).

Studies of an outbreak of Q fever in Baku in 1956 suggest that the gray rat is possibly a natural reservoir of the disease, according to N. N. Sterkhova and M. G. Akhundov, Azerbaydzhan (77, 34).

Rickettsia tsutsugamushi were isolated from an adult tick, *Ixodes*, by Juan Kuang-lieh, I Ying-nan, and Kao Ling-i, Fukien Institute of Epidemiology, and Cheng Pi-te, Fuchow Army Health and Epidemic Control Stations (85, 32).

Basic Research

A simple and precise method of calculating antigen-antibody reactions, as an aid to immunization studies, is the objective of a proposal by A. I. Nesterova, Moscow, to investigate the dielectric permeability of antigens, antibodies, and their suspensions. The authors describe one method of appraisal, with their data. The dielectrometer they diagram is based on the phenomena of resonance (92, 32).

Differences in light refraction between live and dead bacterial cells are the subject of experiments by B. A. Fikhman, Moscow. Bacterial specimens, in a clear gel prepared in distilled water, were examined in the immersion system of an MFA-2 anoptal microscope, capable of detecting changes in light refraction indexes lower than 0.001 (80, 32).

Rats with a high content of vitamin C in their tissues are relatively resistant to low-temperature effects, observes M. F. Merezhinskiy, Minsk (98, 34).

With the Krotov apparatus, G. I. Sidorenko, Moscow, performed 2,876 analyses of bacterial aeroplankton with samples taken at altitudes from 1.5 to 152 meters, November 1954 to December 1955 (102, 33).

Toxic properties of viruses are discussed by B. F. Semenov and V. I. Gavrilov, Moscow. The toxicity refers to the capability of viruses to cause pathological tissue changes which are not connected with the dispersion of the agent (162, 44).

Program Notes

Radioactive Wastes

Underground tank storage of highly radioactive liquid wastes is "not an ultimate solution," according to Dr. Joseph Lieberman, head of the Atomic Energy Commission's Environmental and Sanitary Engineering Branch, in an address prepared for the second sanitary engineering conference on radiological aspects of water supplies. Lieberman called for more research on ways of converting liquid wastes resulting from reprocessing of irradiated nuclear fuels into solids that can be safely disposed or stored for long periods of time and on systems for final disposal in specific geologic formations, obviating the use of tanks that eventually rust through.

There is not enough dilution available in nature, according to Lieberman, to allow the continual dispersal of these highly radioactive reprocessing wastes into the environment. He urged a vigorous effort to find absolutely safe and economical methods of disposition of the fission products from nuclear power reactors within the next 20 to 25 years.

Services for Migrants

In Hollandale, Minn., 14 organizations joined forces in a community health project to hasten assimilation of migrant workers into Minnesota life.

At the request of the State employment service, a tuberculosis testing survey of the seasonal labor force needed and employed by local canning and refining industries was accomplished. Organizations participating included the Minnesota Department of Health, Freeborn County public health nurses and welfare board, physicians of the county medical society, the ladies aid societies of four churches, the Mineral Springs Sanatorium, the Minnesota State Department of Welfare, the Freeborn County Health Association, the Freeborn County

Tuberculosis Association, and the State Christmas Seal organization, as well as State and local employment services.

Of the 469 Mexican migrants from Texas surveyed, 238 persons were 15 years of age or older. And of these 238, 66.5 percent, or 158 persons, reacted positively to the tuberculin test.

Smoking in Pregnancy

Infants whose mothers smoked regularly throughout pregnancy averaged 6 ounces less at birth than infants whose mothers were non-smokers, according to an investigation of 2,042 women delivered in 6 Birmingham, England, maternity hospitals. Dr. C. R. Lowe, in the *British Medical Journal*, October 10, 1959, said there were 1,155 non-smokers and 668 regular smokers in the group. The histories of 219 women were omitted because their smoking pattern during pregnancy had not been uniform.

Progress in St. Louis

Metropolitan St. Louis, Mo., during the past 4½ years, has improved its sewage disposal system by establishing standard criteria for the design and construction of sanitary and storm water facilities, reviewing private and public sewage and drainage works to insure conformity with overall master plans, and centralizing its engineering inspection department.

Safe and Restful

In an effort to anticipate consumer interests, manufacturers now assert that seat belts make driving more comfortable as well as safer and improve driving skill. Seat belts today, they also say:

- Reduce fatigue and strain.
- Do not wrinkle clothing, if properly worn.
- Are available for children, and are washable.
- Improve driving skill by assisting the driver to retain control in

sudden stops, minor collisions, quick turns, or unexpected road hazards.

The lifesaving quality of seat belts, proved in crash tests, on the highways, in aviation accident studies, and by U.S. Air Force tests, remains the basic advantage, provided drivers adhere to prudent speeds.

Dishwashing Detector

A powder which detects hidden grease, starch, or protein films on "apparently clean" dishes has been developed at the University of Michigan School of Public Health in an effort to help sanitarians check dishwashing performance. The powder, a mixture of dry talc and dye, is sprinkled lightly on a dry dish which is then rinsed and drained dry. Red coloring on the dish indicates a soiled area.

Fallout Monitors

New York State has set up what is believed to be the first early warning system for radioactive fallout. Automatic air monitors are installed at Buffalo and Binghamton, in Westchester County, and on Long Island.

Radiation Pamphlet

The Rensselaer County Health Department in Troy, N.Y., has published "Radiation Protection," a pamphlet describing the procedures and techniques which reduce radiation hazards to patients and operators during operation of dental X-ray machines.

Restaurant Inspections

To eliminate unnecessary duplication of routine sanitary inspections of restaurants and similar business establishments by three State agencies, Governor Nelson A. Rockefeller has delegated primary responsibility for these inspections to the New York State Health Department. The Governor ordered the labor department to end its inspections and the agriculture department to inspect only those restaurants not previously checked by the health department. The departments of health and agriculture will advise each other when one finds violations that come under the other's jurisdiction.

Federal Publications

Handbook on Programs of the U.S. Department of Health, Education, and Welfare. 1960 edition; 229 pages; \$1.50.

This handbook brings together information about the program objectives of each major unit of the Department and the extent of the problem toward which the program is directed, the scope of the program, its legal basis, and related information. In addition, the volume provides for each program a 5-year summary of fiscal, personnel, and other statistics showing program dimensions and trends.

Available for the first time as a public document, the handbook is to be issued annually. It will be particularly valuable when used in conjunction with the annual report of the Department and "Health, Education, and Welfare Trends," also published annually by the Department.

Copies may be purchased from the U.S. Government Printing Office, Washington 25, D.C. Free sample copies are not available.

Alcoholism. *PHS Publication No. 730 (Health Information Series No. 97); 1960; 15 pages; 10 cents.* Briefly traces history of alcoholic beverages and explores some of the reasons people drink. Explains how alcohol affects the body and behavior. Describes symptoms of alcoholism and outlines methods of treatment and rehabilitation. Summarizes and interprets current research.

The Dental Profession in the Midwest. *PHS Publication No. 751; 1960; by Walter J. Pelton, Ruth Bothwell, and Helen M. Vavra; 20 pages; 15 cents.*

Dental manpower in six midwestern States, Iowa, Kansas, Missouri, Nebraska, North Dakota, and South Dakota, is surveyed in terms of need and supply. The declining dentist-population ratio is noted, and the factors which produced it are discussed.

Two manpower projections show the deficits in dentist supply which the midwest will face in 1975. The first estimates the dental force needed to provide care for a larger population using dental services at a rate comparable to that which existed in 1958, and the second estimates the force required to meet the anticipated higher demand for dental care.

Text tables and charts provide data on the dental force and population of each State and the region as a whole.

Introduction to Arthropods of Public Health Importance. *PHS Publication No. 772; 1960; by Harry D. Pratt, Kent S. Littig, and Clarence W. Marshall; 35 pages; 30 cents.*

Arthropod-borne diseases and the ways insects and their allies affect man and domestic animals are discussed. Anatomy of arthropods and types of life cycles are described, and keys to classes and orders of arthropods of public health importance are given.

Twenty-five illustrations, a list of films, and selected references are included.

Health Information for Travel in Europe. *PHS Publication No. 748; leaflet.* Required and recommended immunizations are described. Included also are precautions on food and water consumption.

Model State Vital Statistics Act. 1959 revision. *PHS Publication No. 794; 1960; 30 pages.*

Drafted to guide States considering revision of their vital statistics laws, this model sets forth minimum principles, policies, and practices necessary to maintain an efficient and uniform vital statistics system in the United States.

The 1959 model act introduces major advances in vital statistics legislation. For example, with most births now occurring in hospitals, it places responsibility for preparing and filing birth certificates on hos-

pitals. Recommendations governing applications for delayed registrations, corrections of records, and penalties arising through fraudulent use of records have been greatly strengthened.

Copies of the 1959 act may be obtained from State departments of health, as well as the Public Health Service.

Historical Roster of State and Territorial Health Officers, 1850-1960. *PHS Publication No. 787; 1960; 40 pages; 60 cents.*

This roster is a chronological record, State by State, of the health officers under whom public health administration on a statewide basis was inaugurated and developed.

Brief historical notes tell about the origin of the early State boards of health. The introduction pays tribute to Lemuel Shattuck of Massachusetts, who delineated the pattern and precepts for public health organization in this country.

An appendix provides background information on the founding and organization of the Association of State and Territorial Health Officers.

Sewage and Waterworks Construction, 1959. *PHS Publication No. 758; 1960; 14 pages; 20 cents.*

Construction activity, as indicated by contract awards, in the areas of municipal water supply and municipal sewage disposal is summarized.

Data for various subcategories of construction are presented by major river basin, State, population size group, and contract size group. Similar tabulations have been published for the past 7 years.

Biological Factors in Domestic Rodent Control. *PHS Publication No. 773; revised 1960; by Robert Z. Brown; 28 pages; 25 cents.*

Identification of rodents, particularly Norway and roof rats and the house mouse, and their life history, behavior, and senses are discussed. Signs of rodent infestation and the ecological factors affecting rodent populations are also described.

An up-to-date list of references is provided.

1959 Highlights of Progress in Research on Oral Diseases. *PHS Publication No. 760; 1959; 22 pages; 15 cents.*

Directed primarily to dental public health workers, dentists, and dental educators, this booklet discusses activities at the National Institute of Dental Research, Public Health Service.

Studies on periodontal disease, caries, and other oral diseases and disorders are reported. Work in these fields by grantees of the institute is also described.

Highlights of Research, 1959. Progress in arthritis and metabolic diseases. *PHS Publication No. 753; 1960; 41 pages; 20 cents.*

Forty-three studies by the National Institute of Arthritis and Metabolic Diseases and by non-government research centers receiving support from the institute are described. These studies deal with rheumatic diseases, diabetes, gastroenterology, and basic research.

Scientific Directory and Annual Bibliography, National Institutes of Health, 1960. *PHS Publication No. 750 (Public Health Bibliography Series No. 30); 1960; 111 pages.*

Key personnel, staff members with doctorate degrees, and visiting scientists with tenure of a year or more are listed to reflect the organizational structure of the National Institutes of Health, Public Health Service, as of January 1960.

Scientific and technical papers published by the NIH staff during 1959 comprise the bibliography. Alphabetized by senior author, they are listed under the organizational unit to which he was attached when the work was done and indicate the accomplishments of each component.

Procedures for Testing Pasteurization Equipment. *PHS Publication No. 731; revised 1960; by Hugh E. Eagan; 43 pages; 25 cents.*

A detailed handbook on the methods of inspecting and procedures for testing milk pasteurization equipment is provided for the milk sanitarian.

This step-by-step outline, when used in conjunction with the laboratory phosphatase test and coliform

examination, should enable the control official to assure the public of a palatable supply of milk and milk products free of communicable diseases.

Indians on Federal Reservations in the United States. A digest. Oklahoma City area and Florida. *PHS Publication No. 615, Part 5; 1960; 34 pages.*

Data are given on Indian groups in the Oklahoma Indian health area, comprising Oklahoma and portions of Kansas, Mississippi, North Carolina, and South Carolina, and in Florida. Included is a brief description of location, ownership, and topography of reservation land, and a discussion on population groups and their social characteristics, with emphasis on homes, education, income sources, and health services and status.

Domestic Agricultural Migrants in the United States (Map and Table). *PHS Publication No. 540; revised 1960; 25 cents.*

To assist public health and other service agencies in identifying areas of migrant labor concentration so that they may plan adjustments in their programs to meet seasonal needs, the map indicates in round figures the number of migrants expected in each county at the peak of the crop season. The date of peak influx and the span of the crop season, as well as the number of workers and the total number of migrants, are tabulated for each county.

Data are given only for counties with 100 or more migrants.

Nurses in Public Health. Number and educational preparation of nurses employed in the United States, Puerto Rico, and the Virgin Islands on January 1, 1960. *PHS Publication No. 785; 1960; 52 pages.*

Based on data collected by directors of public health nursing in State health departments, this census includes nurses employed by State and local, official and nonofficial public health agencies, boards of education, and industries. The report should be useful to health agencies and professional organizations, universities, and national groups concerned with health manpower resources.

Facts About the Professional Nurse Traineeship Program. *PHS Publication No. 520; revised 1960; leaflet with two supplements.*

Long-term regular academic and short-term phases of the professional nurse traineeship program for administration, supervision, and teaching are described. The brochure covers basic information about the traineeships, eligibility requirements, and how to apply. Supplements list participating schools and sponsoring agencies.

Proceedings, 1960 Annual Conference of the Surgeon General, Public Health Service, with State and Territorial Mental Health Authorities. *PHS Publication No. 771; 1960; 48 pages.*

Reports on the manpower crisis in the mental health field and the planning of mental health facilities, summaries by 6 discussion groups on specialized programs, and 15 recommendations are presented.

The recommendations cover amendment of social security laws as they relate to type of illness covered and public assistance benefits, alcoholism activities, studies on the emotional problems of children, mental health information and education practices, mental retardation services and studies, and expansion of resources for school mental health programs.

This section carries announcements of new publications prepared by the Public Health Service and of selected publications prepared with Federal support.

Unless otherwise indicated, publications for which prices are quoted are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. Orders should be accompanied by cash, check, or money order and should fully identify the publication. Public Health Service publications which do not carry price quotations, as well as single sample copies of those for which prices are shown, can be obtained without charge from the Public Inquiries Branch, Office of Information, Public Health Service, Washington 25, D.C.

The Public Health Service does not supply publications other than its own.
